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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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David B. Small

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EXAMINER

HADIZONOOZ, BANAFSHEH

ART UNIT

PAPER NUMBER

3715

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/758,779	Applicant(s) SMALL ET AL.	
	Examiner Banafsheh Hadizonooz	Art Unit 3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

In response to the amendment filed on 01/30/2008, claims 1 and 3-32 are pending in this application. Claim 2 has been cancelled. This office action is made **Non-Final**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12, 14-17, 29, 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sims (US 6,657,616 B2) in view of Inoue et al.(US 5,831,600) and further in view of Ohara et al. (US 5,485,176).

[Claim 1, 14, 15]: Sims discloses a system comprising a frequency scanning circuit; a control circuit (e.g. microprocessor) in communication with the signal scanning circuit (e.g. RF signal receiver and transmitter), and AC/DC converter (See Col.4, 49-57), wherein the system is configured to detect a human finger when the finger enters the RF field (See Abstract and Col.1-53-Col.2, 36). The RF scanning circuit further comprises of a matrix of conductive lines arranged as a plurality of spaced apart column conductive lines separated by an electrically inclusive sheet from row of conductive lines (e.g. interdigitated alignment)(See Abstract and figure 1, element 36). Sims does not specifically disclose wherein the RF signal is input into the specific column conductive line according to a predetermined input sequence as directed by a first and

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second coordinated control signal outputted by a control circuit. Inoue discloses a coordinate input device comprising a memory in communication with the control circuit, a scan signal switch and input and output switching circuit connected respectively to column and row conductive lines and are operated by the control circuit (e.g. CPU) (See Abstract, Figure 1 and Col. 1, 60- Col.2, 34). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Sim's invention to incorporate the features of Inoues invention in order to design a system that facilitates a more accurate simultaneous display selection system.

Sims/Inoue do not disclose an audible output device in communication with the control circuit that outputs audible messages. Ohara discloses an information display system comprising a matrix of conductive lines (See Fig.3) wherein upon selection of an indicia by a user the audio outputs associated with said indicia is retrieved from the memory and outputted through a speaker (See Abstract and fig. 1). Therefore, it would have been obvious to one o ordinary skill in the art to modify Sim/Inoue's invention according to the teachings of Ohara to incorporate the audible output device in order to design a system that can be used for educational purposes.

[Claim 3]: Regarding claim 3, Sims further discloses a RF scanning circuit comprising a RF oscillator (See Col.3, 62-64).

[Claims 4, 5]: Regarding claims 4 and 5, Inoue further discloses that the scanning circuit comprises an input/output switching device (e.g. multiplexer) which routes the signal generated by the oscillator to each of the conductive lines according to

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the predetermined sequence, and is in communication with the control circuit (e.g. CPU) and the conductive lines (Col.1, 60-Col.2, 15).

[Claims 6-9, 17 and 29]: Regarding claims 6 and 9 Sims further discloses a filtering circuit (See Col.4, 49-56), which attenuates the signal voltages (e.g. removes the noise component and hence a bandpass filter).

[Claim 7]: Regarding claim 7, the system of Sims invention discloses the amplified and filtered coupled RF signals that are AC voltage sine wave signals (See Col.4, 37-57).

[Claims 8, 17]: With respect to claims 8, and 17, Sims teaches amplifying and filtering the coupled RF signal and Ac to DC converter (See Col.4, 49-57).

[Claims 10 and 11]: With respect to claims 10 and 11, Sims discloses that the RF signal has a frequency of 100 KHz (See Col.3, 62-64). Sims does not specifically disclose the amplitude of 18 VAC. However, the applicant has not disclosed that the specific VAC voltage is for a particular purpose or solves any stated problem. Moreover, one of ordinary skill in the art would have expected the system to work equally well with the signal amplitude of more than 18VAC. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Sim's invention to provide signal amplitude of 18 VAC, because such modification is considered to be a matter of design choice.

[Claim 13]: Regarding claim 13, Inoue discloses a microcontroller (e.g. host computer).

[Claims 16]: Regarding claim 16, Sims further teaches analyzing one or more electrical characteristics of the coupled RF signal after an RF signal is input into all of the column conductive lines (See Claim 17).

[Claims 18 and 19]: Regarding claims 18 and 19 Inoue discloses a matrix of conductive lines that are arranged horizontally with a preferred orientation, wherein the control circuit is configured to configure and analyze a single human finger presence among a plurality of possible human finger presences detected by the scanning circuit(See Figure 6, Col.7, 27-38).

[Claims 30-32]: Regarding claim 30, Sims/Inoue discloses inputting predetermined RF frequencies into the conductive lines and outputting a RF signal at the predetermined frequency (See 'Inoue' Col.1, 60-Col.2, 34). Sims further discloses that the memory stores the received RF signals from the conductive lines and control circuit (e.g. processor) and uses the values as a base line to compare with the signals that are received later (See Col.4, 58-64).

Claims 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sims (US 6,657,616) in view of Ohara (US 5485176) and further in view of Westerman et al. (US 6,323,846).

[Claims 20, 21, 23-26 and 28]: Sims discloses a system comprising a frequency scanning circuit; a control circuit (e.g. microprocessor) in communication with the signal scanning circuit (e.g. RF signal receiver and transmitter), and AC/DC converter (See Col.4, 49-57), wherein the system is configured to detect a human finger when the finger enters the RF field (See Abstract and Col.1-53-Col.2, 36). Sims does not

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specifically disclose a memory in communication with the control circuit and an audible output device. Ohara discloses an information display system comprising a matrix of conductive lines(See Fig.3) wherein upon selection of an indicia by a user the audio outputs associated with said indicia is retrieved from the memory and outputted through a speaker (See Abstract and fig. 1). Therefore, it would have been obvious to modify the touch sensitive sensor system of Sims' invention based on the teaching of Ohara in order to take advantage of the technology in designing an interactive educational display system.

Sims/Ohara do not specifically disclose a control circuit to detect and select among the plurality of human fingers. However,Westerman discloses a method for for integrating manual input on a touch screen display, wherein the system is capable of detecting the presence of multiple fingers (See Abstract and Col.9, 37- col.10 38). Therefore, it would have been obvious to one of ordinary skill in the art to modify Sims/Ohara's invention based on the teachings of Westerman in order to design an interactive display system that is suitable for young children who frequently touch the display screen with multiple fingers.

[Claims 22 and 27]: Regarding claims 22 and 27, Ohara discloses an interactive book that retrieves audible messages from memory in response to selection of indicia (See Abstract and fig.1). Ohara does not specifically teach providing instructions to the user. However, since Ohara's system is directed to children, it would have been obvious to include some sort of instruction to direct the child to the next action because such addition would have been considered a matter of design choice.

Response to Arguments

Applicant's arguments with respect to claims 1 and 3-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Banafsheh Hadizonooz whose telephone number is 571-272-1242. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571) 272- 7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BH

/Cameron Saadat/
Primary Examiner, Art Unit 3715